of new ideas. In the Technology Policy Statement of 1983 the Government of India enunciated the Technology Policy emphasising technological self-reliance. The basic objective of the Technology Policy was the development of indigenous technology and efficient absorption and adaptation of imported technology appropriate to national priorities and resources. While the Science and Technology policies were clearly enunciated, the Science and Technology Policy of 2003, despite declarations such as the innovation decade, left a lot to be desired by way of priorities and action plans.

Prof Rishikesha Krishnan provides several policy prescriptions with regard to innovation. The innovation systems of different countries have evolved in different ways because of historical, political, cultural, social and economic factors and philosophies. There is no 'ideal' way of organising the innovation system. After an exhaustive study of industrial innovation systems abroad and in India, the author raises the issue: Why have Indian companies failed to develop a more robust set of industrial innovation capabilities? Is it because of the lack of the right inputs? Or do Indian companies simply lack the capacity to innovate? The author surveys the political economy of the Indian industrial policy and concludes that the innovation policy is an orphan as in the government structure, the Science and Technology (S&T) ministry is on the periphery of decision making. Of three strands of innovation comprising innovation ecology namely classical innovation from researchers and scientists, innovations from the 'creative class' and the business world, [2] the S&T ministry has a grip on only the first and that too has loosened with high impact R&D moving from labs to in-house R&D units and now to the R&D subsidiaries of multinationals.

As a way ahead, Prof Rishikesha Krishnan outlines several options;

- Create a critical mass of new, innovative, technology driven firms
- Enhance technological capability of existing micro, small and medium enterprises (MSMEs)
- Transform large private companies
- Create new incentive systems for universities and other institutions of higher education
- Continue dynamic reform of public R&D organisations
- Change structure of government involvement in supporting industrial R&D
- Create supportive societal conditions for industrial innovation.

Moving away from romantic notions of 'jugaad' innovations, the author calls for a systematic approach to innovation. Innovation led growth is on a slippery territory — just a few sites produce most of the world's innovations. Innovation remains difficult without a critical mass of financiers, entrepreneurs and scientists often nourished by world class universities and global corporations. Since science and technology are founded on rigour and quality, it will be a mistake to be distracted by sheer quantity. It is critical that we focus more diligently on the quality of the science and engineering workforce we produce, find new ways to increase effectiveness of current funding and adopt modern approaches to collaborate.

[2] http://siteresources.worldbank.org/WBI/Resources/213798-1278955272198/ThreeStrandsofInnovation.pdf.

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The Silver Lining: An Innovation Playbook for Uncertain Times; by Anthony, Scott D; 2009; Boston: Harvard Business School Press, pp. 210, US$ 25.00, (h/b), ISBN 978-1-4221-3901-1

What must companies do to survive 'the Great Disruption'? That is the question that Scott Anthony, the president of Innosight, sets out to answer in this book. What Anthony means by the term 'the Great Disruption' is simple: we live in an era when competitive dynamics is being defined by the ability of new firms to both strategically 'disrupt' and 'redefine' the notion of quality by shifting focus to new dimensions of performance. This is Anthony's third book on innovation from Harvard Business School Press; what interests him however is not innovation per se, but the process of 'disruptive innovation'. Anthony's interest in the theory and practice of disruptive innovation is linked to the idea that it is not enough for a company or the market leader to be 'better' than the competition since hard-won competitive advantages can be easily lost. It is therefore important to work at 'changing the game' rather than aim to produce a better product or service. The notion of the Great Disruption refers then to the idea that companies cannot take the rules of the game for granted anymore, but must demonstrate agility when disrupted by the competition. As long as the game was about getting better and better, there was clarity on what must be done; once disruptive innovation became necessary to derive a competitive advantage, the rules of the game were not clear anymore.

What is it that Anthony hopes to do with this book? 'This book', he writes, 'is intended to be a guide for executives and innovators seeking to seize the silver lining in today's difficult times, for strategists and investors trying to spot industry winners and losers, and for individuals thinking about how to tighten their own belts or reinvent themselves' (p.21). The strategies for managing the Great Disruption discussed here should make it possible for companies to seize the 'ample opportunities' that are available — provided they learn to 'prune prudently' (p.23).

What this means is that companies must decide what the trade-off is between funding disruptive innovations *vis-à-vis* existing businesses. It is not easy to do so however using the traditional models of valuation that most companies use to make funding decisions. The main criterion should be to close 'businesses that lack both potential and option value'. The urgency of the situation arises from the fact that if a company does not take a proactive approach to disruptive innovation, it can become the victim of a disruptive attack. The reasons for this are poorly understood since companies derive satisfaction from the fact that they either have the best product or

can come up with a better product. But what the theory of disruptive innovation argues is that a company can suffer a setback even if the competition introduces a product that is 'worse'. Why does this happen? This happens because most end-users do not avail of all the features built into a product. Disruptive innovators introduce products that work only with a subset of features that are required to get the job done by targeting those customers who are unable to afford a product with a full range of features. These customers, who suffer from constraints, prefer a product that is 'good enough' to what is considered to be the best. In order to win over such customers, who constitute the largest segment of most markets, the company must not go about cost-cutting in the traditional sense, but must focus instead on 'refeaturing' the product. Anthony cites Clayton Christensen's argument that it is, 'the job, and not the customer or the product', that matters. It is the job that 'should be the fundamental unit of market segmentation and analysis' (p.54). This citation, and the argument that it puts forth, is important since it is Christensen who formalised the theoretical framework of 'disruptive innovation'. The strategic consultancy that Anthony works for is itself a spin-off from Christensen's theoretical framework.

While companies set out on the path of disruptive innovation, they must remember to 'align' the newly refeatured product to meet the needs and demands of customers. In order to do so consistently, they will have to make innovation as systematic as possible. Anthony advises companies to do 'an innovation capabilities audit' to not only identify openings in the market, but to also make sure that the requisite resources are available to pursue these entrepreneurial opportunities. In addition to doing so, companies must remember to make strategic experiments to see if their entrepreneurial attempts at innovation will work. A cost-effective way of doing this is to invest in startups; Intel, for instance, has used Intel Capital to do so. Intel's strategy of investing and forming 'strategic alliances' with startups has not only seen the development of new businesses, but has also managed to 'create new demand for Intel's microprocessors'. Or, to put it more simply, 'entrepreneurs don't take risk, they manage risk'. It is a good idea to invoke the notion of innovation partners to reduce the cost and risk factors in the process of innovation. Companies can reduce risk even further by setting up an innovation ecosystem 'and smartly share risk with customers, external experts, channel partners, competitors, and startup companies' (p.124). In order to do so successfully, Anthony comes up with three forms of strategic action that the company must adopt: these strategic actions pertain to what companies must 'stop' doing, what they must henceforth do 'differently', and what they must 'start' doing. In order to cater to customers at the 'low-end', it is important to stop 'overshooting' on product attributes, build 'low-cost solutions', and then launch them with a workable business model.

Anthony also lists ten important examples of companies that have disrupted successfully; he not only examines their business models but tries to situate what these companies have in common within the theory and practice of disruptive innovation. What characterises most companies however is the unwillingness to innovate in the disruptive sense of the term; that is why they need to spend so much pushing their products, and in trying to grow through mergers and acquisitions that destroy value. The spectacular growth of venture capital itself may have something to do, Anthony argues, with the fact that companies can't recognise an entrepreneurial opportunity sufficiently to back it with the requisite funding. A great deal of disruptive innovation then is happening in the context of startups. Most disruptive innovators, who have become household names recently, did not even exist a few years ago. Many of these disruptors are online companies that make it possible for millions of people to do small jobs that may have required professional help in the past, but which they are now able to do on their own by deploying disruptive products and services whether they are trying 'to manage professional networks', buying books online, trying to reach global markets, participate in 'online learning', simplify 'data analysis', and so on. Most of these customer needs would have either remained unmet or stayed too costly to meet off-line, but the invention of online payment systems and business models has made it possible to expand the range of disruptive innovations through e-commerce platforms. These then are but a few examples of how a structural notion of the 'low-end' and the 'bottom of the pyramid' in segmentation theory can revolutionise what it means to do business in the years to come through the frame work of disruptive innovation.

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